XXXV. *A Letter from Mr.* George Edwards, *F. R. S. to* Thomas Birch *D. D. Secret. R. S. concerning An Obſervation made by him in Opticks.*

Sir,

Read June 16, 1763. I Having lately accidentally diſcovered, that the ſhadows of things floating in water, a little below its ſurface, are reflected from the air above the water more ſtrongly (to my apprehenſion) than objects above the ſurface of the water are reflected from the water; and conſequently, that fiſhes playing beneath the ſurface of a ſtill water, may ſee their images diſtinctly playing in the air, with this advantage over men, who view their faces in the water; for things in air, that are reflected from the water, muſt have, when placed over the water, have their dark or ſhadowed ſides reflected from it, which renders the images obſcure. On the contrary, the inhabitants of the waters have almoſt a hemiſphere of light falling on their upper ſides, which are the ſides, that are reflected from the air, which conſequently renders ſuch images lighter, and more ſtriking to the eye, than reflections of obſcured things in air, when reflected from the water. As I have never heard of, or read, any account of this diſcovery, I imagine it may be new: but you, Sir, in far more extenſive reading, may be acquainted with ſuch a diſcovery. If ſo, I acknowledge my ignorance of it; and aſk pardon for giving

giving you this trouble, and deſire it may be layed aſide; but, if it be thought worthy communicating to the Royal Society, I will be ready, in a very ſimple and eaſy manner, to demonſtrate the truth of the above diſcovery. I do not ſee any uſe of this diſcovery at preſent, more than an amuſing ſpeculation; tho' perhaps, when it is reconſidered by perſons ſuperior to me in penetrating into the ſecrets of optics, ſome real uſe may be made of it.

I am Sir, with great

reſpect, your very

June 15, 1763.

humble ſervant

George Edwards.